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**Investigation of Molten Gallium as a Regenerative Laser  
Target for Pulsed Soft X-ray Production\***

P.R. Bolton, J. Dunn, and P.L. Stephan,

Physics and Space Technology Directorate,  
Lawrence Livermore National Laboratory,  
P.O.Box 808, Livermore, CA 94551.

Self-regenerating targets are useful for experimental developments requiring repetition-rated laser irradiation. As such molten gallium is a viable source of pulsed soft x-ray radiation driven by intense laser pulses. Soft x-ray yields in the 100 eV to 2000 eV region driven by 800 nm laser irradiation of ultrashort duration have been measured using a multi-channel, filtered, back-thinned CCD camera. We will present results from our measurements and describe general characteristics of this regenerative target.

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